Power Delivery Protection
Simply cancel ESD and EOS events

The ESDAxxP family is the right way to protect USB charging circuits to improve device robustness.

The ESDAxxP series is aimed at protecting USB charging circuits to improve the robustness and lifetime of your devices. Five different voltages (5, 9, 12, 15 and 20 V) are proposed in order to support the most popular charging standards.

**KEY FEATURES**
- Complete voltage range: 5, 9, 12, 15 and 20 V
- High 8/20 µs \(I_{pp}\) capability from 35 to 120 A.
- Small, thin package: 1.0 x 1.6 x 0.55 mm

**KEY BENEFITS**
- A single package for all voltages
- Minimize consumption of the PCB area
- Highest housed \(I_{pp}\) in the market embedded in a 1.6 x 1.0 mm package

**KEY APPLICATIONS**
- Smartphones
- Tablets
- IoT devices
- Wearables
- Drones

www.st.com/tvs-usb-c-powerdelivery
3 REASONS TO ADOPT THE ESDAxxP

**Robustness:**
The ESDAxxP series can absorb up to 120 A peak pulse current while always keeping the clamping voltage versus operational voltage ratio below 2. For instance, your 5 V USB circuit will never face more than a 10 V overvoltage during transient events (IEC61000-4-2 ESD and IEC61000-4-5 surges).

**Discretion:**
The ESDAxxP series saves space on PCBs so that you can integrate more functions or further miniaturize your device. Housed in a 1.0 x 1.6 mm QFN package, the maximum thickness of 0.55 mm is ideal for your flat devices.

**Simplicity:**
Change the USB charging voltage without changing your PCB! We offer protection devices for 5 V, 9 V, 12 V and 20 V charging voltages in the same QFN package.

### PEAK PULSE CURRENT PERFORMANCES

![Graph showing peak pulse current (I_{pp}) 8/20 µs versus V_{RM} for ESDAxxP series.]

### PRODUCT TABLE

<table>
<thead>
<tr>
<th>ESDA7p60-1U1M</th>
<th>ESDA7p120-1U1M</th>
<th>ESDA13P70-1U1M</th>
<th>ESDA15P60-1U1M</th>
<th>ESDA17P50-1U1M</th>
<th>ESDA25P35-1U1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand-off voltage (V_{RM})</td>
<td>5.5 V</td>
<td>5.5 V</td>
<td>12 V</td>
<td>13.2 V</td>
<td>15 V</td>
</tr>
<tr>
<td>Peak pulse current (I_{pp}, 8/20 µs)</td>
<td>60 A</td>
<td>120 A</td>
<td>70 A</td>
<td>60 A</td>
<td>50 A</td>
</tr>
</tbody>
</table>

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